ABSTRACT OF THE DISCLOSURE

The present water reclamation system comprises a series of concentric thin shells. The shells mount within a housing that can be maintained under vacuum or low pressure. The shells rotate at high velocity. Contaminated liquid from outside the housing is injected into the space between half the shells. The centrifugal force causes the liquid to form a thin film along the inward facing surface of the shell. A compressor lowers the pressure adjacent the thin film causing the liquid to boil. the compressor carries the vapor to the other side of those shells at a slightly higher temperature. There the vapor encounters the wall, which is cooler because its heat was transferred to boil the contaminated liquid. The vapor condenses, and rotation throws the condensate against the adjacent wall where it is collected. When condensing, the heat of condensation transfers to the shell for boiling the incoming contaminated liquid. The system needs no heat sources other than the energy of vapor compression to complete the cycle flow from vaporization to condensation. Various systems inject contaminated liquid into the device and collect the purified liquid and contaminated sludge.